

Advanced Photopolymer

Flame Retardant Black (Arkema FR512)



This material is a flame-retardant resin that achieves a UL-94 rating of V-0 at 0.031 in. (0.8mm) while maintaining good print accuracy with fine feature parts.

Applications

Electrical connectors, flame retardant materials

Key Product Benefits

- High strength and heat deflection temperature (HDT)
- Liquid at room temperature
- Robust printing and processing

Tolerances

Expected tolerances are +/- 0.010 in. (0.25mm) for the first inch plus 0.1% (0.001mm/mm) of nominal length. Note that tolerances may change depending on part geometry. Please request critical dimensions when you upload your part, and our applications engineers will quickly review and provide feedback.

Properties

Normal resolution: 0.004 in. (0.100mm)
High resolution: 0.002 in. (0.050mm)

Feature Sizes

- Structural wall thickness: 0.020 in. (0.5mm)
- Supported walls (ribs, bosses, etc.): 0.010 in. (0.25mm)
- Positive features: 0.010 in. (0.25mm)
- Negative features/holes: 0.020 in. (0.5mm)

Property	Test Method	Value
Color	—	Black
E-module*	ASTM D638, test speed 5mm/min	4500 MPa
Tensile strength*	ASTM D638, test speed 5mm/min	42 MPa
Elongation at break*	ASTM D638, test speed 5mm/min	4.20%
Heat deflection temperature @ 0.46 MPa*	ASTM D648	338 F (170 C)
Heat deflection temperature @ 1.82 MPa*	ASTM D648	201 F (94 C)
Flammability*	UL94	V0 @ 0.8 mm

*From supplier data sheet